$$P_{inf}^{\delta}(h) = \left(\frac{\delta - \delta 1}{0.5}\right)\Delta P_{inf} + P_{inf}^{\delta 1}$$

$$P_{sup}^{\delta}(h) = \left(\frac{\delta - \delta 1}{0.5}\right)\Delta P_{sup} + P_{sup}^{\delta 1}$$

with $\Delta P_{inf} = P_{inf}^{\delta 1+0.5} - P_{inf}^{\delta 1}$

$$\Delta P_{sup} = P_{sup}^{\delta 1+0.5} - P_{sup}^{\delta 1}.$$

The proximity curve of an ophthalmic lens is one characteristic of the lens and it is therefore possible to identify an optical lens by determining the proximity curve using appropriate analysis means.

Starting from a proximity curve of this kind it is possible to determine the surfaces required for the front and rear of the optical lens so that it satisfies this proximity curve.

As the corresponding techniques are within the competence of those skilled in the art they will not be described here.

The rear of the optical lens **11** in accordance with the invention may be a part-spherical surface, for example, only the front surface having to be adapted to provide the necessary proximity curve.

Any combination of spherical or aspherical surfaces giving a proximity curve within the previously described limits is feasible.

In the diagrams of FIGS. **3A** through **3D** the proximity P in diopters is plotted against the distance h in millimeters and there are shown in chain-dotted outline the respective envelope curves P_{inf}, P_{sup} (I) corresponding, for a distant vision proximity value P_{VL} equal to 0, to a proximity addition A_{DD} equal to 1.5 for FIG. **3A**, equal to 2 for FIG. **3B**, equal to 2.5 for FIG. **3C** and equal to 3 for FIG. **3D**.

For other, positive or negative values of P_{VL} the P_{inf} (h) and P_{sup} (h) curves can be deduced by simple translation.

These diagrams also show in full line between the envelope curves P_{inf}, P_{sup} a nominal curve P_{nom} which is particularly satisfactory.

The nominal curve P_{nom} satisfies the following equation:

$$P_{nom} = f(h) = (\Sigma A_i h^i) + P_{VL}$$

with values for the numeric coefficients A_i substantially equal to the following values:

for A_{DD} =	1.5 D:
A0 =	1.8983333
A1 =	−3.8368794
A2 =	17.797017
A3 =	−34.095052
A4 =	28.027344
A5 =	−10.464243
A6 =	1.464837
A7 =	0
for A_{DD} =	2 D
A0 =	12.637321
A1 =	−85.632629
A2 =	269.61975
A3 =	−425.09732
A4 =	361.26779
A5 =	−168.43481
A6 =	40.408779
A7 =	−3.8719125
for A_{DD} =	2.5 D

-continued

A0 =	−12.716558
A1 =	100.95929
A2 =	−240.63054
A3 =	275.14871
A4 =	−167.1658
A5 =	51.982597
A6 =	−6.5103369
for A_{DD} =	3 D
A0 =	39.633326
A1 =	−257.41671
A2 =	765.31546
A3 =	−1 214.0375
A4 =	1 096.6544
A5 =	−566.84014
A6 =	156.24996
A7 =	−17.826136

It will be noted that at least in the central part the lower envelope curve P_{inf} and the upper envelope curve P_{sup} are generally similar to the corresponding nominal curve P_{nom}.

Along one of the proximity curves shown in the diagrams of FIGS. **3A** through **3D** the local value of the proximity gradient dP/dH preferably does not exceed 5 D/mm continuously over a range of proximity greater than 0.25 D (II).

As can be seen in the figures, the proximity corresponding to the lower limit of the useful area **10** has a value greater than (P_{VL} + A_{DD}).

Preferably, and as shown in FIGS. **3A** through **3D**, the average proximity gradient G_{VP} for near vision as evaluated only from the coordinates of points on the nominal curve P_{nom} corresponding to the above-specified limits of the near vision area Z_{VP} and the mean proximity gradient G_{VL} for distant vision, similarly evaluated, are related as follows:

$$G_{VP}/G_{VL} > 2 \qquad \text{(III)}$$

Preferably, and as in the embodiment shown, the surface S_{VP} of the transition section contributing usefully to near vision, in practise the surface of the near vision area S_{VP}, and the surface S_{VL} of the transition section contributing usefully to distant vision, in practise the surface of the distant vision area Z_{VL}, are related as follows:

$$S_{VL}/S_{VP} \geqq 3 \qquad \text{(IV)}$$

Experience shows that the characteristics II, III and IV yield good results.

Of course, the present invention is not limited to the embodiment described and shown but encompasses any variant execution thereof.

We claim:

1. Progressive simultaneous vision optical lens for correcting presbyopia in which the curve representing its proximity P defined as the reciprocal in diopters of the distance D at which a light ray parallel to and at a distance h from its axis crosses the axis after passing through the lens lies within an area between a lower envelope curve P_{inf} and an upper envelope curve P_{sup} defined by nth and hth degree polynomials and satisfying the following equations:

$$P_{inf} = f(h) = (\Sigma A'_i h^i) + P_{VL}$$

$$P_{sup} = f(h) = (\Sigma A''_i h^i) + P_{VL} \text{ (I)}$$